<400> 2

## SEQUENCE LISTING

```
Pan, Clark
       Tsutsumi, Manami
       Shanafelt, Armen B.
<120> Pituitary Adenylate Cyclase Activating Peptide (PACAP) Receptor 3
        (R3) Agonists an Their Pharmacological Methods of Use
<130>
       MSB 7272P2
       US 09/671,773
<140>
<141>
       2000-09-27
<150>
       US 09/595,280
       2000-06-15
<151>
<150>
       US 09/407,832
       1999-09-28
<151>
<160>
       343
<170>
       PatentIn version 3.3
<210>
       28
<211>
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (28)..(28)
<223>
       AMIDATION
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn 20 25
<210>
<211>
       38
<212>
       PRT
<213>
      Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (38)..(38)
<223>
       AMIDATION
```

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 1 5 10 15 Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu Gly Lys Arg Tyr Lys 20 25 30 Gln Arg Val Lys Asn Lys 35 <210> 3 <211> 30 <212> PRT Artificial <213> <220> <223> Synthetic Construct <220> <221> MOD\_RES (30)..(30) <222> <223> AMIDATION <400> 3 His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  $20 \hspace{1cm} 25 \hspace{1cm} 30$ <210> 4 <211> 39 <212> PRT Artificial <213> <220> <223> Synthetic Construct <220> <221> <222> MOD\_RES (39)..(39)<223> **AMIDATION** <400> 4 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser 20 25 30 Ser Gly Ala Pro Pro Pro Ser 35

```
<210>
        31
<211>
<212>
        PRT
        Artificial
<213>
<220>
        Synthetic Construct
<223>
<220>
<221>
        MOD_RES
<222>
        (1)..(1)
<223>
        ACETYLATION
<220>
<221>
        MISC_FEATURE
<222>
        (17)..(17)
<223>
        NТе
<220>
<221>
        MOD_RES
<222>
        (31)..(31)
<223>
        AMIDATION
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 1 	 5 	 10 	 15
Xaa Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr 20 25 30
<210>
<211>
        6
        31
<212>
        PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
       MOD_RES
<222>
        (1)..(1)
<223>
       ACETYLATION
<220>
<221>
       MOD_RES
<222>
        (31)..(31)
<223>
       AMIDATION
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr 20 25 30
```

```
<211>
       31
<212>
       PRT
       Artificial
<220>
        Synthetic Construct
<223>
<220>
       MOD_RES
<221>
<222>
        (1)..(1)
<223>
        ACETYLATION
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr
20 25 30
<210>
        8
        31
<211>
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr 20 \\ 25 \\ 30
<210>
        9
<211>
       28
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
        (1)..(1)
<223>
       ACETYLATION
<220>
       MISC_FEATURE
<221>
       (10)..(10)
Xaa is methoxy-Tyr
<222>
<223>
```

```
<220>
<221>
        MISC_FEATURE
<222>
       (17)..(17)
<223>
<220>
<221>
        MOD_RES
<222>
        (28)..(28)
<223>
        AMIDATION
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Xaa Thr Lys Leu Arg Lys Gln 10 15
Xaa Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys 20 25
<210>
        10
<211>
        28
<212>
       PRT
<213>
        Artificial
<220>
<223>
       Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
        (1)..(28)
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys 20 25
<210>
       11
<211>
        28
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
<223>
        (28)..(28)
       AMIDATION
<400>
       11
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
```

```
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys 20 . . . 25
<210>
        12
        31
<211>
<212>
        PRT
       Artificial
<213>
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Gly Gly Thr 20 25 30
<210>
       13
<211>
       31
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
        (1)..(31)
<400>
       13
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 1 5 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Leu Asn Gly Gly Thr 20 25 30
<210>
       14
       31
<211>
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
       PEPTIDE
<221>
<222>
       (1)..(31)
<400>
       14
```

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Leu Asn Gly Gly Thr  $20 \hspace{1cm} 25 \hspace{1cm} 30$ <210> 15 <211> 31 <212> PRT <213> Artificial <220> <223> Synthetic Construct <220> <221> **PEPTIDE** <222> (1)..(31)<400> 15 His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gly Gly Thr 20 25 30 <210> 16 <211> 28 <212> PRT Artificial <213> <220> <223> Synthetic Construct <220> <221> <222> MOD\_RES (28)..(28) <223> AMIDATION <400> 16 His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys 20 25 <210> 17 <211> 31 <212> PRT Artificial <213> <220> <223> Synthetic Construct

```
<220>
<221>
       PEPTIDE
<222>
       (1)...(31)
<400> 17
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr 20 25 30
<210>
        18
<211>
        40
<212>
       PRT
      Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr Ser 20 25 30
Trp Cys Glu Pro Gly Trp Cys Arg
35 40
<210>
       19
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gly Gly Thr 20 25 30
```

```
<210>
        20
<211>
        31
<212>
       PRT
<213>
        Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(31)
<400>
        20
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Val Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gly Gly Thr 20 25 30
<210>
        21
<211>
        31
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(31)
<400>
       21
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Gly Gly Thr
20 25 30
       22
31
<210>
<211>
<212>
       PRT
<213>
      Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
                                           Page 9
```

```
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Asn Gly Gly Thr 20 25 30
       23
<210>
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)...(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Gly Gly Thr
<210>
       24
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
<223>
      Synthetic Construct
<220>
<221>
<222>
       PEPTIDE
       (1)..(31)
<400> 24
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Gly Gly Thr
20 25 30
<210>
       25
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
       Synthetic Construct
<223>
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
```

```
<400> 25
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Leu Ala Val Lys Lys Tyr Leu Asn Asp Ile Lys Asn Gly Gly Thr 20 25 30
<210>
        26
<211>
        31
<212>
        PRT
        Artificial
<213>
<220>
<223> Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
       (1)..(31)
<400> 26
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Gly Gly Thr 20 \hspace{1cm} 25 \hspace{1cm} 30
<210>
        27
<211>
<212>
        30
        PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gly Gly 20 25 30
<210>
        28
<211>
       29
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
```

```
<220>
<221>
        PEPTIDE
       (1)..(29)
<400>
        28
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gly
20 25
        29
28
<210>
<211>
<212>
        PRT
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(28)
<400> 29
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys 20 25
<210>
        30
<211>
        29
<212>
<213>
       PRT
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(29)
<400>
       30
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gln
20 25
<210>
       31
<211>
```

```
<212>
      PRT
<213>
      Artificial
<220>
<223>
      Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 31
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Asn Gln 20 25 30
<210>
       32
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Lys Arg Tyr
20 25 30
<210>
<211>
       28
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys
```

20 25

```
<210>
       34
<211>
       28
<212>
<213>
       PRT
       Artificial
<220>
<223>
      Synthetic Construct
<220>
<221>
       PEPTIDE
       (1)..(28)
<222>
<400>
      34
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Asn 20 25
<210>
       35
<211>
       28
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
<400> 35
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Lys 20 25
<210>
       36
<211>
       28
<212>
       PRT
      Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
<400>
       36
```

```
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Glu Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn 20 25
<210>
        37
<211>
<212>
        28
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(28)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Glu Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn 20 25
<210>
        38
<211>
       28
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
        (1)..(28)
<222>
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Leu Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn 20 25
<210>
        39
       28
<211>
<212>
       PRT
       Artificial
<213>
<220>
       Synthetic Construct
<223>
<220>
```

```
<221> PEPTIDE
<222> (1)..(28)
<400> 39
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 \cdot 5 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Leu Asn 20 25
<210>
       40
<211>
        28
<212>
       PRT
       Artificial
<213>
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
<400> 40
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Asp Ile Leu Asn 20 25
<210>
       41
<211>
      28
<212> PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(28)
<400> 41
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn 20 25
<210>
       42
       28
<211>
<212>
       PRT
<213> Artificial
```

```
<220>
        Synthetic Construct
<220>
<221>
        PEPTIDE
       (1)..(28)
<400>
        42
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Leu Lys 20 25
<210>
        43
<211>
<212>
        28
        PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
        (1)..(28)
<400> 43
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys 20 25
<210>
        44
<211>
        31
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400> 44
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg Tyr 20 25 30
```

```
<210>
        45
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 45
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg 20 25 30
<210>
        46
        29
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(29)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys 20 25
<210>
       47
<211>
       31
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
```

```
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
        48
<211>
        31
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
       (1)..(31)
<400> 48
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg Tyr 20 25 30
<210>
        49
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 49
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg 20 25 30
<210>
        50
<211>
<212>
        29
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(29)
```

```
<400> 50
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys 20 25
<210>
        51
<211>
        31
<212>
        PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
        (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
<211>
       52
28
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
        (1)..(28)
<400> 52
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Lys
20 25
       53
28
<210>
<211>
<212>
       PRT
<213>
       Artificial
<220>
```

Synthetic Construct

```
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
<400>
       53
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10. 15
Ile Ala Ala Lys Lys Tyr Leu Gln Thr Ile Lys Lys 20 25
<210>
       54
       144
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                          60
ggatccatcg aaggtcgtca ctccgatggt atcttcaccg actcctactc tcggtaccgc
                                                                         120
aagcagatgg ctgtaaagaa atatctggct gcagtcctag gcaaacgtta caagcaacgc
gttaaaaaca agtaatgact cgag
                                                                         144
<210>
       55
       114
<211>
<212>
       DNA
       Artificial
<213>
<220>
       Synthetic Construct
<223>
<400> 55
                                                                          60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgttaagaa atacctgaat tccatcctga actaatgact cgag
                                                                         114
<210>
       56
<211>
       123
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
                                                                          60
ggatccatcg aaggtcgtca ctccgatgct gttttcaccg aaaactacac caagcttcgt
                                                                         120
aaacagctgg cagctaagaa atacctcaac gacctgaaaa agggcggtac ctaatgactc
                                                                         123
gag
       57
<210>
       38
<211>
<212>
       PRT
```

```
<213> Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(38)
<400>
       57
His Ser Asp Gly Ile Phe Thr Glu Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Leu Lys Lys Lys Arg Tyr Lys 20 25 30
Gln Arg Val Lys Asn Lys
35
       58
28
<210>
<211>
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (28)..(28)
<223>
       AMIDATION
<400>
        58
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Leu Lys Lys 20 25
<210>
       59
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES (31)..(31)
<222>
<223>
       AMIDATION
<400> 59
```

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ Met Ala Val Lys Lys Tyr Leu Ser Ala Val Arg His Gly Gly Thr 20 25 30 <210> 60 <211> 31 <212> PRT <213> Artificial <220> <223> Synthetic Construct <220> <221> MOD\_RES <222> (31)..(31)<223> **AMIDATION** <400> 60 His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln
1 10 15 Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Gln Gly Gly Thr 20 25 30 <210> 61 <211> 36 <212> **PRT** Artificial <213> <220> <223> Synthetic Construct <220> <221> MOD\_RES <222> (31)..(31)<223> **AMIDATION** <400> 61 His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Lys Tyr Leu Ala Ala 20 25 30 Val Arg His Gly 35 <210> 62

<211>

<212>

<213>

40

PRT

Artificial

```
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
        (1)..(40)
<222>
<400> 62
Ser Trp Cys Glu Pro Gly Trp Cys Arg His Ser Asp Ala Val Phe Thr 1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15
Glu Asn Tyr Thr Lys Leu Arg Lys Gln Leu Ala Ala Lys Lys Tyr Leu 20 25 30
Asn Asp Leu Lys Lys Gly Gly Thr
<210>
        63
<211>
        31
<212>
        PRT
        Artificial
<213>
<220>
        Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
        (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Leu Lys Gly Gly Thr
20 25 30
<210>
        64
<211>
        31
<212>
        PRT
        Artificial
<213>
<220>
<223>
        Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
        (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
```

```
Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Leu Asn Gly Gly Thr 20 \hspace{1cm} 25 \hspace{1cm} 30
<210>
        65
<211>
        31
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(31)
<400> 65
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Val Lys Lys Tyr Leu Asn Asp Ile Leu Lys Gly Gly Thr 20 25 30
<210>
        66
<211>
        31
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400> 66
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 1 10 15
Leu Ala Ala Lys Lys Tyr Leu Ala Asp Val Lys Lys Gly Gly Thr 20 25 30
<210>
       67
<211>
       28
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
```

```
<400> 67
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Leu Ala Ala Lys Lys Tyr Leu Ala Asp Val Lys Lys 20 25
<210>
       68
<211>
       28
<212>
       PRT
       Artificial
<213>
<220>
      Synthetic Construct
<223>
<220>
<221>
<222>
       PEPTIDE
       (1)..(28)
<400> 68
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Leu Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Lys 20 25
<210>
<211>
       69
       28
<212> PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(28)
<400> 69
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Lys 20 25
<210>
       70
<211>
       28
<212>
       PRT
<213>
       Artificial
<220>
<223> Synthetic Construct
```

```
<220>
       PEPTIDE
<221>
       (1)..(28)
<222>
<400> 70
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys 20 25
       71
30
<210>
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223> Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
<400> 71
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg
20 25 30
<210>
       72
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
       73
<211>
       31
       PRT
```

```
<213> Artificial
<220>
      Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
       (1)..(31)
<400> 73
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 10 15
Leu Ala Ala Lys Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr 20 \hspace{1cm} 25 \hspace{1cm} 30
<210>
        74
<211>
        31
<212>
        PRT
       Artificial
<213>
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
       (1)..(31)
<400> 74
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
        75
<211>
        31
<212>
        PRT
<213>
        Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(31)
<400> 75
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Met Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys Arg Tyr 20 25 30
                                            Page 28
```

```
<211>
       31
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
<222>
       PEPTIDE
       (1)..(31)
<400>
       76
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
       77
<211>
       31
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
       77
His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
       78
<211>
<212>
       31
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(31)
<400>
       78
His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln
                                           Page 29
```

<210>

76

Leu Ala Ala Lys Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr 20 25 30

```
<210> 79
```

<211> 31

<212> PRT <213> Artificial

<220>

<220>
<223> Synthetic Construct

5

<220>

<221> PEPTIDE

<222> (1)..(31)

<400> 79

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15

Met Ala Ala His Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30

<210> 80

<211> 31

<212> PRT

<213> Artificial

<220>

<223> Synthetic Construct

<220>

<221> PEPTIDE

<222> (1)..(31)

<400> 80

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 5 10 15

Met Ala Ala Lys His Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30

<210> 81

<211> 31

<212> PRT

<213> Artificial

<220>

<223> Synthetic Construct

<220>

<221> PEPTIDE

```
<222> (1)..(31)
<400> 81
His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala His Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr
<210> 82
<211>
<212>
       31
       PRT
<213>
      Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
       PEPTIDE
       (1)...(31)
<400> 82
His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln 10 15
Leu Ala Ala Lys His Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr
20 25 30
<210>
       83
<211>
       30
<212>
      PRT
      Artificial
<213>
<220>
<223>
      Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 83
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Týr Leu Gln Ser Ile Lys Lys Lys Arg
20 25 30
<210>
       84
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
```

```
<223> Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 84
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Val Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg 20 25 30
<210>
<211>
        85
        31
<212>
        PRT
       Artificial
<213>
<220>
      Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Val Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
        86
<211>
<212>
        30
       PRT
       Artificial
<213>
<220>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Lys Lys Arg
20 25 30
<210> 87
```

```
<211> 29
<212>
<213>
       PRT
        Artificial
<220>
<223> Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
        (1)..(29)
<400> 87
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Lys Lys 20 25
<210>
        88
<211>
        31
<212>
        PRT
       Artificia
<213>
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)...(31)
<400> 88
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys Arg Tyr 20 25 30
<210>
<211>
        89
        31
<212>
        PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
```

```
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Lys Lys Arg Tyr 20 25 30
       90
<210>
       30
<211>
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Lys Lys Arg 20 25 30
<210>
       91
       29
<211>
<212>
      PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(29)
<400>
       91
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Lys Lys 20 25
      92
<210>
<211>
      29
<212> PRT
<213> Artificial
<220>
      Synthetic Construct
<223>
<220>
       PEPTIDE
<221>
<222>
       (1)..(29)
<400> 92
```

```
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys 20 25
       93
<210>
       31
<211>
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400> 93
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Leu Lys Lys Arg Tyr 20 25 30
<210>
       94
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
       (1)..(30)
<222>
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Leu Lys Lys Arg
20 25 30
<210>
       95
       29
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
```

```
<220>
<221>
       PEPTIDE
      (1)..(29)
<400>
       95
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Leu Lys Lys 20 25
       96
<210>
<211>
       29
<212>
       PRT
      Artificial
<213>
<220>
<223>
       Synthetic Construct
<400> 96
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
<210>
       97
<211>
       31
<212>
       PRT
      Artificial
<213>
<220>
      Synthetic Construct
<223>
<220>
<221>
       PEPTIDE
<222>
       (1)..(31)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Asn Lys Arg Tyr 20 25 30
<210>
       98
       30
<211>
<212>
      PRT
<213>
      Artificial
<220>
<223>
      Synthetic Construct
```

```
<221>
        PEPTIDE
       (1)..(30)
<400>
        98
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Asn Lys Arg 20 \ 25 \ 30
        99
<210>
<211>
        29
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(29)
<400>
        99
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Asn Lys 20 25
<210>
        100
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
        (1)..(30)
<400> 100
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Cys Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        101
<211>
        30
<212>
        PRT
<213> Artificial
```

<220>

```
<220>
        Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        101
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Met Ala Asp Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        102
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Glu Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg
20 25 30
<210>
       103
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
        (1)..(30)
<400>
       103
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Phe Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg
20 25 30
```

```
104
<210>
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
       104
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
       105
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 105
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala His Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
       106
<211>
       30
<212>
       PRT
<213> Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 106
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
                                           Page 39
```

```
Met Ala Ile Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        107
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
<222>
        PEPTIDE
       (1)..(30)
<400>
       107
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 10 15
Met Ala Lys Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        108
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 108
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Leu Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
       109
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<220>
<221>
       PEPTIDE
       (1)..(30)
```

```
<400> 109
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Met Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        110
<211>
        30
<212>
        PRT
        Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
<222>
        PEPTIDE
       (1)..(30)
<400> 110
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 5 10 15
Met Ala Asn Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        111
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223> Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Pro Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg
20 25 30
<210>
       112
<211>
<212>
       30
       PRT
       Artificial
<213>
<220>
<223> Synthetic Construct
```

```
<220>
        PEPTIDE
<221>
        (1)..(30)
<400>
      112
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Gln Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg
20 25 30
<210>
       113
<211>
<212>
        30
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
        (1)..(30)
<400> 113
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Met Ala Arg Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        114
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 114
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210> 115
<211> 30
```

```
<212> PRT
<213> Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
<222>
        PEPTIDE
       (1)..(30)
<400>
      115
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Thr Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
        116
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
       117
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        117
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Met Ala Trp Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg
```

```
<210>
       118
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 118
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Tyr Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg 20 25 30
<210>
       119
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 119
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Ala Asn Lys Arg 20 25 30
<210>
       120
<211>
<212>
       30
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
```

120

```
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Cys Asn Lys Arg 20 . 25 . 30
<210>
        121
<211>
        30
<212>
        PRT
        Artificial
<213>
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
        (1)..(30)
<400>
        121
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Asp Asn Lys Arg 20 25 30
<210>
       122
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 122
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Glu Asn Lys Arg
20 25 30
<210>
       123
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<220>
```

```
<221> PEPTIDE
<222>
       (1)..(30)
<400> 123
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Phe Asn Lys Arg 20 25 30
<210>
        124
        30
<211>
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        124
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Gly Asn Lys Arg 20 25 30
<210>
        125
<211>
        30
<212>
        PRT
        Artificial
<213>
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile His Asn Lys Arg
20 25 30
<210>
        126
<211>
        30
<212>
        PRT
<213>
       Artificial
```

```
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        126
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Ile Asn Lys Arg
<210>
        127
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
      127
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Met Asn Lys Arg
20 25 30
<210>
        128
<211>
<212>
        30
        PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 128
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Asn Asn Lys Arg 20 25 30
```

```
<210>
       129
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
        Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Pro Asn Lys Arg 20 25 30
<210>
        130
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
       130
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Gln Asn Lys Arg 20 25 30
<210>
       131
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
       131
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
```

```
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Arg Asn Lys Arg 20 25 30
        132
<210>
        30
<211>
<212>
        PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
       (1)..(30)
<400> 132
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Ser Asn Lys Arg 20 \hspace{1cm} 25 \hspace{1cm} 30
<210>
        133
<211>
        30
<212>
        PRT
        Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(30)
<400> 133
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Thr Asn Lys Arg
20 25 30
<210>
        134
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
      (1)..(30)
```

```
<400> 134
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Val Asn Lys Arg 20 25 30
<210>
        135
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
       135
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Trp Asn Lys Arg 20 25 30
<210>
       136
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
      136
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Tyr Asn Lys Arg
20 25 30
<210>
       137
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
```

```
<220>
        PEPTIDE
<221>
<222>
       (1)..(30)
<400> 137
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Ala Arg 20 25 30
<210>
        138
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
       138
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Cys Arg 20 25 30
<210>
        139
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Asp Arg 20 25 30
<210>
       140
<211>
       30
<212>
       PRT
```

```
<213> Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        140
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Glu Arg 20 25 30
<210>
        141
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
        (1)..(30)
<400>
       141
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Phe Arg
20 25 30
<210>
       142
       30
<211>
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 142
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Gly Arg 20 25 30
```

```
<210>
        143
        30
<211>
<212>
        PRT
<213>
        Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        143
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn His Arg 20 25 30
<210>
        144
<211>
<212>
        30
        PRT
<213>
        Artificial
<220>
<223>
        Synthetic Construct
<400>
       144
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Ile Arg 20 25 30
<210>
       145
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 145
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Leu Arg 20 25 30
```

```
<210>
        146
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
       146
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Met Arg 20 25 30
<210>
       147
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Asn Arg
20 25 30
<210>
       148
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
      148
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
                                          Page 54
```

<220>

<221> PEPTIDE

```
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Pro Arg 20 25 30
<210>
       149
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
<223> Synthetic Construct
<220>
<221>
      PEPTIDE
<222>
      (1)..(30)
<400> 149
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Gln Arg 20 25 30
<210>
       150
       30
<211>
<212>
       PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 150
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Arg 20 25 30
<210>
       151
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
```

```
<222> (1)..(30)
<400> 151
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Ser Arg 20 25 30
<210>
       152
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<220>
<221>
       PEPTIDE
       (1)..(30)
<400> 152
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Thr Arg 20 25 30
<210>
      153
<211>
      30
<212>
      PRT
<213>
      Artificial
<220>
<223>
       Synthetic Construct
<400> 153
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Val Arg 20 25 30
<210>
       154
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
      Synthetic Construct
<220>
<221> PEPTIDE
```

```
<222> (1)..(30)
<400> 154
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Trp Arg 20 25 30
<210>
       155
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
       Synthetic Construct
<220>
<221>
       PEPTIDE
       (1)..(30)
<400>
      155
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Tyr Arg
20 25 30
<210>
       156
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
       (1)..(30)
<222>
<400> 156
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Ala 20 25 30
<210>
       157
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
```

```
<223> Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 157
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Asp 20 25 30
        158
<210>
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Glu
20 25 30
<210>
       159
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Phe 20 25 30
<210> 160
```

```
<211>
       30
<212>
      PRT
<213> Artificial
<220>
<223>
      Synthetic Construct
<220>
       PEPTIDE
<221>
       (1)..(30)
<400> 160
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Gly 20 25 30
<210>
       161
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
      (1)..(30)
<400> 161
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys His 20 25 30
<210>
       162
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
<222>
       PEPTIDE
       (1)..(30)
<400> 162
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
```

```
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Ile 20 25 30
        163
<210>
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Lys 20 25 30
<210>
       164
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
       164
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Leu
20 25 30
<210>
       165
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
       (1)..(30)
<400>
       165
```

```
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Met 20 25 30
<210>
        166
<211>
<212>
        30
        PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
        PEPTIDE
<222>
       (1)..(30)
<400> 166
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Asn 20 25 30
<210>
        167
<211>
        30
<212>
        PRT
      Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 167
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Pro 20 25 30
<210>
        168
<211>
        30
<212>
        PRT
       Artificial
<213>
<220>
<223> Synthetic Construct
```

```
<220>
<221>
        PEPTIDE
       (1)..(30)
<400>
       168
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Gln 20 25 30
<210> 169
<211> 30
<212> PRT
<213> Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 169
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Ser 20 25 30
<210>
        170
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
       Synthetic Construct
<220>
<221>
        PEPTIDE
       (1)..(30)
<400> 170
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Thr 20 \\ 25 \\ 30
<210>
       171
<211>
       30
<212>
       PRT
<213>
       Artificial
```

```
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 171
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Val
20 25 30
<210>
       172
<211>
       30
<212>
      PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Trp 20 25 30
<210>
       173
<211>
      30
<212>
      PRT
       Artificial
<213>
<220>
<223>
      Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Tyr 20 25 30
```

```
<210>
       174
<211>
       40
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(40)
<400> 174
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys Arg Tyr Ser 20 25 30
Trp Cys Glu Pro Gly Trp Cys Arg
<210>
       175
<211>
       31
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(31)
<400>
      175
His Ser Asp Ala Val Phe Thr Asp Asp Tyr Thr Arg Leu Arg Lys Glu 1 5 10 15
Val Ala Ala Lys Lys Tyr Leu Glu Ser Ile Lys Asp Lys Arg Tyr 20 25 30
<210>
       176
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
```

```
<400> 176
Glu Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
        177
<211>
        27
<212>
       PRT
       Artificial
<213>
<220>
<223> Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       177
His Lys Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
      178
<211>
       27
       PRT
<212>
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
       MOD_RES
<221>
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       178
His Ser Lys Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       179
<211>
       27
<212>
       PRT
<213> Artificial
```

```
<220>
       Synthetic Construct
<220>
       MOD_RES (27)..(27)
<221>
<222>
<223>
        AMIDATION
<400>
      179
His Ser Asp Lys Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       180
<211>
       27
<212>
       PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400> 180
His Ser Asp Gly Lys Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       181
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
      Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       181
His Ser Asp Gly Ile Lys Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
```

```
<210>
       182
<211>
        27
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       182
His Ser Asp Gly Ile Phe Lys Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       183
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       183
His Ser Asp Gly Ile Phe Thr Lys Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu 20 25
<210>
       184
<211>
       27
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
```

```
<400> 184
His Ser Asp Gly Ile Phe Thr Asp Lys Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
        185
<211>
        27
<212>
        PRT
<213>
        Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
       MOD_RES
<222>
        (27)..(27)
<223>
       AMIDATION
<400>
        185
His Ser Asp Gly Ile Phe Thr Asp Ser Lys Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       186
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
        (27)..(27)
<223>
       AMIDATION
<400>
       186
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Lys Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu 20 25
<210>
       187
<211>
       27
       PRT
<212>
       Artificial
```

<213>

```
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400> 187
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Glu Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       188
<211>
      27
<212> PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
      188
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Lys Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       189
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       189
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Glu Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
                                         Page 69
```

<220>

```
<210>
        190
<211>
        27
<212>
        PRT
        Artificial
<213>
<220>
<223>
        Synthetic Construct
<220>
<221>
        MOD_RES
<222>
        (27)..(27)
<223>
        AMIDATION
<400>
        190
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Glu Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu 20 25
<210>
       191
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
       MOD_RES
<222>
        (27)..(27)
<223>
        AMIDATION
<400>
      191
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Lys 1 \hspace{1cm} 10 \hspace{1cm} 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       192
<211>
       27
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       MOD_RES
<221>
<222>
       (27)..(27)
<223>
       AMIDATION
```

```
<400> 192
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Lys Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
        193
        27
<211>
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
<222>
        MOD_RES
       (27)..(27)
<223>
       AMIDATION
<400>
        193
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Lys Val Lys Lys Tyr Leu Ala Ala Val Leu
20 25
<210>
       194
<211>
       27
<212>
       PRT
<213>
       Artificia
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Lys Lys Lys Tyr Leu Ala Ala Val Leu 20 \hspace{1cm} 25
<210>
       195
<211>
       27
<212>
       PRT
<213> Artificial
```

```
<220>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400> 195
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Glu Lys Tyr Leu Ala Ala Val Leu 20 25
<210>
       196
<211>
       27
<212> PRT
<213> Artificial
<220>
<223>
       Synthetic Construct
<220>
       MOD_RES
<221>
<222>
       (27)..(27)
<223>
       AMIDATION
<400> 196
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Glu Tyr Leu Ala Ala Val Leu
20 25
<210>
       197
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       197
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Leu Ala Ala Val Leu
```

20 25

```
<210>
      198
<211>
       27
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
       MOD_RES
<221>
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
      198
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Lys Ala Ala Val Leu
20 25
<210>
       199
<211>
       27
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400> 199
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Lys Ala Val Leu
20 25
<210>
       200
<211>
       27
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       MOD_RES
<221>
       (27)..(27)
<222>
<223>
       AMIDATION
```

```
<400> 200
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Lys Val Leu
20 25
<210>
       201
<211>
       27
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       MOD_RES
<221>
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       201
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Lys Leu
20 25
       202
<210>
<211>
       27
<212>
       PRT
       Artificial
<21:3>
<220>
<223>
       Synthetic Construct
<220>
<221>
       MOD_RES
<222>
       (27)..(27)
<223>
       AMIDATION
<400>
       202
His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln 10 15
Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys
20 25
<210>
       203
<211>
       111
<212>
       DNA
      Artificial
```

<213>

<220> <223>	Synt	hetic Const	truct				
<400> ggatcc	203 atcg	aaggtcgtca	ctccgatggt	atcttcaccg	actcctactc	gaggtaccgc	60
aagcag	atgg	ctgtaaagaa	atatctggct	gcagttctgt	aatgactcga	g	111
<210> <211> <212> <213>	204 123 DNA Arti	ficial					
<220> <223>	Synt	hetic Const	ruct				
<400> ggatcc	204 atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg	ctgttaagaa	atacctgaat	tccatcaaga	aaggcggtac	ctaatgactc	120
gag							123
<210> <211> <212> <213>	205 123 DNA Arti	ficial					
<220> <223>	Synt	hetic Const	ruct				
<400> ggatcca	205 atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	ctgg	ctgctaagaa	atacctgaac	gacatcaaga	aaggtggcac	ctaatgactc	120
gag			•				123
<210> <211> <212> <213>	206 109 DNA Arti	ficial					
<220> <223>	Syntl	hetic Const	ruct				
<400> ggatcca	206 atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacago	ctgg (	ctgctaagaa <sup>'</sup>	atacctgaac	gacatcaaga	aataatgac		109
<211> <212>		ficial					
<220> <223>	Syntl	hetic Const	ruct				
<400>	207						

ggatcc	atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg	ctgttaagaa	atacctgaat	tccatcaaga	aataatgact	cgag	114
<210> <211> <212> <213>	208 114 DNA Art	ificial					
<220> <223>	Synt	thetic Const	truct				
<400> ggatcc	208 atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg	ctgttaagaa	atacctgaat	tccatcaaga	actaatgact	cgag	114
<210> <211> <212> <213>	209 114 DNA Arti	ificial					
<220> <223>	Synt	thetic Const	ruct				
<400> ggatcca	209 atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacaga	atgg	ctgttaagaa	atacctgaat	tccatcctga	aataatgact	cgag	114
<210> <211> <212> <213>	210 114 DNA Arti	ficial					
<220> <223>	Synt	hetic Const	ruct				
<400> ggatcca	210 atcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	ggaactgcgt	60
aaacaga	atgg	ctgttaagaa	atacctgaat	tccatcctga	actaatgact	cgag ·	114
<210> <211> <212> <213>	211 114 DNA Arti	ficial					
<220> <223>	Synt	hetic Const	ruct				
<400> ggatcca	211 itcg	aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
gaacaga	ıtgg	ctgttaagaa	atacctgaat	tccatcctga	actaatgact	cgag	114
<210> <211> <212>	212 114 DNA				·		

```
<213> Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
aaacagctgg ctgttaagaa atacctgaat tccatcctga actaatgact cgag
                                                                       114
<210>
       213
<211>
       114
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                       114
aaacagatgg ctgcaaagaa atacctgaat tccatcctga actaatgact cgag
<210>
       214
<211>
       114
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 214
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                       114
aaacagatgg ctgttaagaa atacctgaat gacatcctga actaatgact cgag
<210>
       215
<211>
       114
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                       114
aaacagatgg ctgcaaagaa atacctgaat tccatcaaga actaatgact cgag
<210>
       216
<211>
       114
<212>
       DNA
       Artificial
<213>
<220>
<223> Synthetic Construct
<400> 216
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
```

aaacag	atgg ctgcaaagaa atacctgaat tccatcctga aataatgact cgag	114
<210> <211> <212> <213>	217 114 DNA Artificial	
<220> <223>	Synthetic Construct	
<400> ggatcc	217 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgcaaagaa atacctgaat tccatcaaga aataatgact cgag	114
<210> <211> <212> <213>	218 123 DNA Artificial	
<220> <223>	Synthetic Construct	
<400> ggatcca	218 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgcaaagaa atacctgaat tccatcaaga aaaagcgtta ctaatgactc	120
gag		123
<210> <211> <212> <213>	219 120 DNA Artificial	
<220> <223>	Synthetic Construct	
<400> ggatcca	219 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgcaaagaa atacctgaat tccatcaaga aaaagcgtta atgactcgag	120
<210> <211> <212> <213>	220 117 DNA Artificial	
<220> <223>	Synthetic Construct	
<400>	220	60
	atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgcaaagaa atacctgaat tccatcaaga aaaagtaatg actcgag	117
<210> <211> <212>	221 123 DNA	

<213>	Artificial	
<220> <223>	Synthetic Construct	
<400> ggatcca	221 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgcaaagaa atacctgaat tccatcaaga acaagcgtta ctaatgactc	120
gag	<del>-</del>	123
<210>	222	
<211> <212> <213>	123 DNA Artificial	
<220> <223>	Synthetic Construct	
<400>	222	
	atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgttaagaa atacctgaat tccatcaaga aaaagcgtta ctaatgactc	120
gag	1	123
240		
<210> <211>	223 120	
<212> <213>	DNA Artificial	
<220>		
<223>	Synthetic Construct	
<400> ggatcca	223 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgttaagaa atacctgaat tccatcaaga aaaagcgtta atgactcgag	120
<210>	224	
<211> <212>	117 DNA	
<213>	Artificial	
<220> <223>	Synthetic Construct	
<400> ggatcca	224 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacaga	atgg ctgttaagaa atacctgaat tccatcaaga aaaagtaatg actcgag	117
210	225	
<210> <211>	225 123	
	DNA Artificial	
<220>		
<223>	Synthetic Construct	

```
<400> 225
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgttaagaa atacctgaat tccatcaaga acaagcgtta ctaatgactc
                                                                        120
                                                                        123
gag
<210>
       226
<211>
       114
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 226
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
aaacaggttg ctgcaaagaa atacctgcag tccatcaaga aataatgact cgag
                                                                        114
<210>
       227
<211>
       114
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 227
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacagatcg ctgcaaagaa atacctgcag actatcaaga aataatgact cgag
                                                                        114
<210>
       228
<211>
       114
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacaggttg ctgcaaagaa atacctgaat tccatcaaga aataatgact cgag
                                                                        114
<210>
       229
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
      229
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
```

```
<210>
       230
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 230
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcctga acaagcgtta atgagaattc
<210>
       231
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacagatgg ctgacaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       232
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 232
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacagatgg ctgagaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       233
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 233
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacagatgg ctttcaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       234
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
```

<400> 234 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	60
aaacagatgg ctggcaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	20
<210> 235 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 235 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	50
aaacagatgg ctcacaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	20
<210> 236 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 236 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	50
aaacagatgg ctatcaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	20
<210> 237 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 237 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	50
aaacagatgg ctaaaaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	20
<210> 238 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 238 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	50
aaacagatgg ctctgaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	<b>.</b> 0
<210> 239	

```
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacagatgg ctatgaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       240
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
       240
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
aaacagatgg ctaacaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       241
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 241
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                         60
aaacagatgg ctccgaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       242
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
aaacagatgg ctcagaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
                                                                        120
<210>
       243
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
       243
```

ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 60				
aaacag	atgg ctcgcaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	<b>:</b> 0		
<210> <211> <212> <213>	244 120 DNA Artificial			
<220> <223>	Synthetic Construct			
<400> ggatcc	244 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	60		
aaacag	atgg cttccaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	:0		
<210> <211> <212> <213>	245 120 DNA Artificial			
<220> <223>	Synthetic Construct			
<400> ggatcc	245 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	60		
aaacag	atgg ctaccaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	.0		
<210> <211> <212> <213>	246 120 DNA Artificial			
<220> <223>	Synthetic Construct			
<400> ggatcc	246 atcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga 6	0		
aaacag	atgg ctgtgaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	0		
<210> <211> <212> <213>	247 120 DNA Artificial			
<220> <223>	Synthetic Construct	•		
<400> ggatcc		0		
aaacag	atgg cttggaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc 12	0		
<210> <211> <212>	248 120 DNA			

```
<213> Artificial
<220>
<223>
       Synthetic Construct
<400> 248
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgcttaaga
                                                                        120
aaacagatgg cttacaagaa atacctgaac tccatcaaga acaagcgtta atgagaattc
<210>
       249
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 249
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcgcga acaagcgtta atgagaattc
<210>
       250
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                       120
aaacagatgg ctgcaaagaa atacctgaac tccatcgaca acaagcgtta atgagaattc
<210>
       251
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223> Synthetic Construct
<400> 251
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                       120
aaacagatgg ctgcaaagaa atacctgaac tccatcgaga acaagcgtta atgagaattc
<210>
       252
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400> 252
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
```

```
aaacagatgg ctgcaaagaa atacctgaac tccatcttca acaagcgtta atgagaattc
                                                                        120
<210>
       253
<211>
       119
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcggca acaagcgtta agagaattc
                                                                        119
<210>
       254
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
       254
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatccaca acaagcgtta atgagaattc
                                                                        120
<210>
       255
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcatca acaagcgtta atgagaattc
<210>
       256
<211>
       120
<212>
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcatga acaagcgtta atgagaattc
                                                                        120
<210>
       257
       120
<211>
<212>
      DNA
<213>
      Artificial
```

```
<220>
<223>
       Synthetic Construct
<400>
       257
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaca acaagcgtta atgagaattc
                                                                        120
<210>
       258
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcccga acaagcgtta atgagaattc
                                                                        120
<210>
       259
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 259
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatccaga acaagcgtta atgagaattc
<210>
       260
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcagga acaagcgtta atgagaattc
                                                                        120
<210>
       261
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<400>
       261
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcagca acaagcgtta atgagaattc
```

```
<210> 262
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcacga acaagcgtta atgagaattc
<210>
       263
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
       263
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcgtga acaagcgtta atgagaattc
                                                                        120
<210>
       264
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400> 264
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatctgga acaagcgtta atgagaattc
<210>
       265
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatctaca acaagcgtta atgagaattc
                                                                        120
<210>
       266
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
```

<400> 266 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt 60	ŀ
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acgcgcgtta atgagaattc 120	ı
<210> 267 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 267 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt 60	I
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acgaccgtta atgagaattc 120	1
<210> 268 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 268 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt 60	l
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acgaacgtta atgagaattc 120	
<210> 269 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 269 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt 60	l
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acttccgtta atgagaattc 120	
<210> 270 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 270 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt 60	
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acggccgtta atgagaattc 120	
<210> 271	

```
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga accaccgtta atgagaattc
                                                                        120
<210>
       272
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
       272
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acatccgtta atgagaattc
                                                                        120
<210>
       273
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 273
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acctgcgtta atgagaattc
                                                                        120
<210>
       274
       120
<211>
<212>
       DNA
      Artificial
<213>
<220>
<223>
       Synthetic Construct
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acatgcgtta atgagaattc
                                                                        120
<210>
       275
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<400>
      275
```

ggatco	atcg aaggtcgtca ctc	cgacgct gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctgcaaagaa ata	cctgaac tccatcaaga	acaaccgtta	atgagaattc	120
<210> <211> <212> <213>	276 120 DNA Artificial				
<220> <223>	Synthetic Construc	t			
<400> ggatcc	276 atcg aaggtcgtca ctc	cgacgct gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctgcaaagaa ata	cctgaac tccatcaaga	acccgcgtta	atgagaattc	120
<210> <211> <212> <213>	277 120 DNA Artificial				
<220> <223>	Synthetic Construct	t			
<400> ggatcc	277 atcg aaggtcgtca ctc	cgacgct gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctgcaaagaa ata	cctgaac tccatcaaga	accagcgtta	atgagaattc	120
<210> <211> <212> <213>	278 120 DNA Artificial				
<220> <223>	Synthetic Construct	t			
<400> ggatcc	278 atcg aaggtcgtca ctco	cgacgct gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctgcaaagaa atao	cctgaac tccatcaaga	accgccgtta	atgagaattc	120
<210> <211> <212> <213>	279 120 DNA Artificial				
<220> <223>	Synthetic Construct	t			
<400> ggatcc	279 atcg aaggtcgtca ctco	cgacgct gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctgcaaagaa atad	cctgaac tccatcaaga	acagccgtta	atgagaattc	120
<210> <211> <212>	280 120 DNA	Page	<b>9</b> 1		

```
<213> Artificial
 <220>
 <223>
        Synthetic Construct
 <400>
 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
 aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acacccgtta atgagaattc
                                                                        120
 <210>
        281
 <211>
        119
 <212>
        DNA
 <213>
        Artificial
<220>
 <223>
        Synthetic Construct
 <400>
gatccatcga aggtcgtcac tccgacgctg ttttcaccga caactacacg cgtctgcgta
                                                                         60
aacagatggc tgcaaagaaa tacctgaact ccatcaagaa cgtgcgttaa tgagaattc
                                                                        119
<210>
        282
<211>
        120
<212>
       DNA
 <213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 282
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga actggcgtta atgagaattc
<210>
        283
<211>
        120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400> 283
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga actaccgtta atgagaattc
<210>
       284
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 284
ggatccatcg aaggtcgtca ctccqacqct qttttcaccq acaactacac gcgtctgcgt
                                                                         60
```

```
120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaaggcgta atgagaattc
<210>
       285
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaaggacta atgagaattc
                                                                        120
<210>
       286
<211>
       119
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
       286
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaaggagta agagaattc
                                                                        119
<210>
       287
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagttcta atgagaattc
<210>
       288
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaaggccta atgagaattc
                                                                        120
<210>
       289
<211>
       120
<212>
       DNA
<213>
      Artificial
```

```
<220>
       Synthetic Construct
<223>
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagcacta atgagaattc
                                                                        120
<210>
       290
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagatcta atgagaattc
                                                                        120
<210>
       291
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 291
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagaagta atgagaattc
                                                                        120
       292
<210>
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagctgta atgagaattc
                                                                        120
<210>
       293
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 293
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagatgta atgagaattc
```

```
<210>
       294
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagaacta atgagaattc
                                                                        120
<210>
       295
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagccgta atgagaattc
                                                                        120
<210>
       296
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400> 296
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagcagta atgagaattc
<210>
       297
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagagcta atgagaattc
<210>
       298
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
```

<400> 298 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagaccta atgagaattc	120
<210> 299 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 299 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaaggtgta atgagaattc	120
<210> 300 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 300 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagtggta atgagaattc	120
<210> 301 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 301 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga acaagtacta atgagaattc	120
<210> 302 <211> 120 <212> DNA <213> Artificial	
<220> <223> Synthetic Construct	
<400> 302 ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt	60
aaacagatgg ctgcaaagaa atacctgaac tccatcaaga accgtatcta atgagaattc	120
<210> 303	

```
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctggcaagaa atacctgaac tccatcaaga accgtatcta atgagaattc
<210>
       304
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctaaaaagaa atacctgaac tccatcaaga accgtatcta atgagaattc
                                                                        120
<210>
       305
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
       305
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctcgcaagaa atacctgaac tccatcaaga accgtatcta atgagaattc
                                                                        120
<210>
       306
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg cttccaagaa atacctgaac tccatcaaga accgtatcta atgagaattc
       307
<210>
<211>
       120
<212>
       DNA
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
       307
```

ggatco	atcg aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctgcaaagaa	atacctgaac	tccatcccga	accgtatcta	atgagaattc	120
<210> <211> <212> <213>	308 120 DNA Artificial					
<220> <223>	Synthetic Const	ruct				
<400> ggatco	308 atcg aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctggcaagaa	atacctgaac	tccatcccga	accgtatcta	atgagaattc	120
<210> <211> <212> <213>	309 120 DNA Artificial					
<220> <223>	Synthetic Const	ruct				
<400> ggatcc	309 atcg aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctaaaaagaa	atacctgaac	tccatcccga	accgtatcta	atgagaattc	120
<210> <211> <212> <213>	310 120 DNA Artificial					
<220> <223>	Synthetic Const	ruct				
<400> ggatcc	310 atcg aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg ctcgcaagaa	atacctgaac	tccatcccga	accgtatcta	atgagaattc	120
<210> <211> <212> <213>						
<220> <223>	Synthetic Const	ruct				
	311 atcg aaggtcgtca	ctccgacgct	gttttcaccg	acaactacac	gcgtctgcgt	60
aaacag	atgg cttccaagaa	atacctgaac	tccatcccga	accgtatcta	atgagaattc	120
<210> <211> <212>	312 120 DNA		Page	Q8		

```
Artificial
<213>
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctgcaaagaa atacctgaac tccatccaga accgtatcta atgagaattc
                                                                        120
<210>
       313
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctggcaagaa atacctgaac tccatccaga accgtatcta atgagaattc
                                                                        120
<210>
       314
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
       314
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctaaaaagaa atacctgaac tccatccaga accgtatcta atgagaattc
<210>
       315
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctcgcaagaa atacctgaac tccatccaga accgtatcta atgagaattc
                                                                        120
<210>
       316
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
       316
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
```

```
120
aaacagatgg cttccaagaa atacctgaac tccatccaga accgtatcta atgagaattc
<210>
       317
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
                                                                        120
aaacagatgg ctgcaaagaa atacctgaac tccatccgta accgtatcta atgagaattc
<210>
       318
       120
<211>
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                         60
aaacagatgg ctggcaagaa atacctgaac tccatccgta accgtatcta atgagaattc
                                                                        120
<210>
       319
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400> 319
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                        120
aaacagatgg ctaaaaagaa atacctgaac tccatccgta accgtatcta atgagaattc
<210>
       320
<211>
       120
<212>
       DNA
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<400>
                                                                         60
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
aaacagatgg ctcgcaagaa atacctgaac tccatccgta accgtatcta atgagaattc
                                                                        120
<210>
       321
<211>
       120
<212>
       DNA
<213>, Artificial
```

والمامت المعادد

```
<220>
<223>
       Synthetic Construct
<400> 321
ggatccatcg aaggtcgtca ctccgacgct gttttcaccg acaactacac gcgtctgcgt
                                                                            60
aaacagatgg cttccaagaa atacctgaac tccatccgta accgtatcta atgagaattc
                                                                           120
<210>
        322
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
       322
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Ile 20 25 30
        323
30
<210>
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
        323
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Ile 20 25 30
<210>
       324
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
```

```
<220>
<221>
        PEPTIDE
<222>
       (1)..(30)
<400>
        324.
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Lys Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Ile 20 25 30
<210>
        325
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
        (1)..(30)
<400>
       325
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 	 5 	 10 	 15
Met Ala Amg Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Ile 20 25 30
<210>
       326
<211>
       30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
<400>
      326
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Ile 20 25 30
<210>
       327
<211>
       30
<212>
       PRT
       Artificial
<213>
```

```
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        327
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile 20 25 30
<210>
        328
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
        PEPTIDE
<221>
<222>
        (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile 20 25 30
<210>
        329
<211>
        30
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
        (1)..(30)
<400>
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Lys Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile 20 25 30
```

```
<210>
        330
<211>
        30
<212>
        PRT
<213>
        Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
        330
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 1 5 10 15
Met Ala Arg Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile 20 25 30
<210>
        331
<211>
        30
<212>
        PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400>
       331
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile 20 25 30
<210>
       332
<211>
<212>
        30
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic Construct
<220>
<221>
<222>
       PEPTIDE
       (1)..(30)
<400>
       332
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
10 15
                                           Page 104
```

```
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile 20 25 30
<210>
       333
       30
<211>
<212>
       PRT
<213>
       Artificial
<220>
       Synthetic Construct
<223>
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
<400>
       333
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile 20 25 30
       334
<210>
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400>
       334
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Lys Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile 20 25 30
       335
<210>
       30
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
                                          Page 105
```

```
<400> 335
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Arg Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile 20 25 30
<210>
       336
<211>
       30
<212>
       PRT
<213>
       Artificial
<220>
<223>
      Synthetic Construct
<220>
       PEPTIDE
<221>
<222>
       (1)..(30)
<400> 336
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile 20 25 30
       337
30
<210>
<211>
<212>
       PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(30)
<400> 337
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile 20 25 30
       338
<210>
       30
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223> Synthetic Construct
```

Page 106

```
<220>
<221>
        PEPTIDE
       (1)..(30)
<400> 338
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile 20 25 30
<210>
        339
<211>
        30
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(30)
<400> 339
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Lys Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile 20 25 30
<210>
        340
<211>
<212>
        30
        PRT
<213>
       Artificial
<220>
<223>
       Synthetic Construct
<220>
<221>
        PEPTIDE
       (1)..(30)
<400> 340
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Arg Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile 20 25 30
<210> 341
<211> 30
```

```
<212> PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
       (1)..(30)
<400> 341
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln 10 15
Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile 20 25 30
<210>
       342
<211>
       19
<212> PRT
<213> Artificial
<220>
<223> Synthetic Construct
<220>
<221>
       PEPTIDE
<222>
       (1)..(19)
<400>
       342
Cys Arg Lys Gln Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Asn 1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15
Lys Arg Tyr
<210>
       343
<211>
<212>
       PRT
<213>
       Artificial
<220>
<223>
        Synthetic Construct
<220>
<221>
        PEPTIDE
<222>
        (1)..(9)
<400>
Ser Trp Cys Glu Pro Gly Trp Cys Arg 1
```